

WHAT IS CLAIMED IS:

1. A traffic monitoring system for providing vehicular traffic information, comprising:

a plurality of motion sensors for detecting speed of traffic information
5 along one or more roadways and transmitting the detected information; and
a database for receiving and storing the detected speed of traffic information transmitted by the plurality of motion sensors,
wherein the database is accessible for providing speed of traffic information detected by a selected portion of the motion sensors.

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2. The traffic monitoring system according to claim 1, further comprising at least one mobile communications unit for accessing the database through the communications link to receive traffic information for a specified geographical location.

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3. The traffic monitoring system according to claim 1, wherein the motion sensors are spaced a distance apart along roadways to measure the speed of traffic at different points along roadways.

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4. The traffic monitoring system according to claim 3, wherein the motion sensors transmit the detected information in periodic intervals.

5. The traffic monitoring system according to claim 4, wherein the motion sensors are programmable such that the periodic interval timing changes according to the time of day or day of week.

5 6. The traffic monitoring system according to claim 5, wherein the motion sensors are powered by solar cells with rechargeable batteries or by batteries.

7. The traffic monitoring system according to claim 1, wherein the motion sensors transmit the detected information over a wireless network.

8. The traffic monitoring system according to claim 7, wherein the wireless network includes a plurality of cell towers for transmitting and receiving radio frequency information within respective cell sites, and the motion sensors transmit the detected information to the respective regional cell tower.

9. The traffic monitoring system according to claim 8, wherein the wireless network is a paging network for transmission of pages of the detected information by the motion sensors.

10. The traffic monitoring system according to claim 1, wherein the database maintains the detected information transmitted by each motion sensor arranged according to the roadway in which the speed of traffic is detected and the location of the sensor on the roadway.

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11. The traffic monitoring system according to claim 10, wherein each database record includes a field indicating the time at which the database record was updated.

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12. The traffic monitoring system according to claim 10, wherein each database record includes a field indicating whether the speed of traffic detected by the respective sensor is normal.

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13. The traffic monitoring system according to claim 10, wherein each database record includes a field indicating a qualitative assessment of the speed of traffic most recently detected by the respective sensor, based upon a history of previous readings detected by the sensor.

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14. A motion sensor for monitoring the flow of vehicular traffic along a roadway, comprising:

a central processing unit;

a transmitter; and

5 a motion sensing detector,

wherein the motion sensor transmits speed of traffic information detected by the detector on a wireless network to a central database.

15. The motion sensor according to claim 14, wherein the speed of
10 traffic information is transmitted at periodic intervals.

16. The motion sensor according to claim 15, wherein the motion sensor is programmable to adjust the intervals by which detected information is transmitted according to time of day.

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17. The motion sensor according to claim 14, wherein the motion sensor is an interactive pager.

18. A traffic monitoring system for providing vehicular traffic information over a wireless network, comprising:

a database for storing vehicular traffic information along a plurality of roadways; and

5 a communications interface connected to the database for transmitting vehicular traffic information;

wherein the database provides traffic information concerning specified geographical locations and transmits the information over the wireless network.

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19. The traffic monitoring system according to claim 18, wherein the database determines the vehicular traffic information based upon a series of speed of traffic values detected by a plurality of motion sensors.

15 20. The traffic monitoring system according to claim 18, wherein the database receives traffic information requests containing specified geographical locations over the wireless network, and the communications interface provides the requested information over the wireless network.

20 21. The traffic monitoring system according to claim 18, further comprising a plurality of mobile communications units for transmitting traffic information requests and for receiving requested traffic information.

22. The traffic monitoring system according to claim 21, wherein the plurality of mobile communications units includes interactive pagers.

5 23. The traffic monitoring system according claim 22, wherein the interactive pagers include a pre-stored listing of destination locations from which a user selects to request traffic information.

24. The traffic monitoring system according to claim 22, wherein the
10 communications interface provides a short text message comprising the requested traffic information in response to a traffic information request from an interactive pager.

25. The traffic monitoring system according to claim 23, wherein the
15 interactive pager is incorporated within a GPS system for receiving both vehicle location information and traffic information.

26. The traffic monitoring system according to claim 21, wherein the plurality of mobile communications units includes cellular telephones.

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27. The traffic monitoring system according to claim 26, wherein the communications interface includes a speech recognition apparatus for

detecting traffic information requests communicated orally on the cellular telephone.

28. The traffic monitoring system according to claim 27, wherein the
5 communications interface includes a speech-to-text generator for providing traffic information to be communicated orally on the cellular telephone or over automobile radio speakers.

29. The traffic monitoring system according to claim 18, further
10 comprising a database for storing mapping information for the plurality of roadways, wherein the traffic monitoring system provides traffic information overlaid on a map in response to traffic information requests.

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30. A traffic monitoring system for providing vehicular traffic information over the Internet, comprising:

a database for storing vehicular traffic information for a plurality of roadways; and

5 an Internet server for communicating vehicular traffic information; wherein the database provides traffic information concerning specified geographical locations in response to traffic information requests.

31. The traffic monitoring system according to claim 30, further comprising a database for storing subscriber access information, wherein users who subscribe to the traffic monitoring system can access the traffic monitoring system through a browser having an Internet connection.

32. The traffic monitoring system according to claim 31, wherein the subscriber accesses the traffic monitoring system after providing a password.

33. The traffic monitoring system according to claim 30, further comprising a database for storing mapping information for the plurality of roadways;

20 wherein the traffic monitoring system provides traffic information overlaid on a map in response to traffic information requests.

34. A method for providing vehicular traffic information according to a specified traffic request, comprising the steps of:

receiving speed of traffic information transmitted by a plurality of motion sensors located along one or more roadways corresponding to the specified traffic request;

storing the traffic information in a database;

determining the traffic information corresponding to the specified traffic request; and

communicating the traffic information.

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35. The method for providing vehicular traffic information according to claim 34, wherein the traffic information request is transmitted and the traffic information is received over a mobile cellular telephone.

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36. The method for providing vehicular traffic information according to claim 34, further comprising the steps of:

determining at least one geographical route for travelling from a starting location to a destination location over navigable roadways;

mapping at least one geographical route; and

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overlaying the traffic information along with the at least one geographical route,

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wherein the specified traffic request includes the starting location and destination location.

37. The method for providing vehicular traffic information according to claim 36, wherein the starting location included in the specified traffic request is automatically determined by a GPS system.

38. The method for providing vehicular traffic information according to claim 34, wherein the motion sensors transmit the traffic information at periodic intervals over a wireless network.

39. The method for providing vehicular traffic information according to claim 34, wherein the traffic information is communicated over a wireless network.

40. The method for providing vehicular traffic information according to claim 34, wherein the traffic information is communicated to a Internet-capable browser through an Internet communications link.

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41. A method for providing advertising information according to a specified geographical mapping request, comprising the steps of:

storing mapping information of a traffic network of vehicular roadways in a database;

5 storing advertising information of advertisers in a database according to geographical locations associated with the advertisers;

receiving requests for geographical directions from a starting location to a destination location; and

transmitting advertising information of at least one advertiser having
10 a geographical location within a predetermined distance from the destination location.